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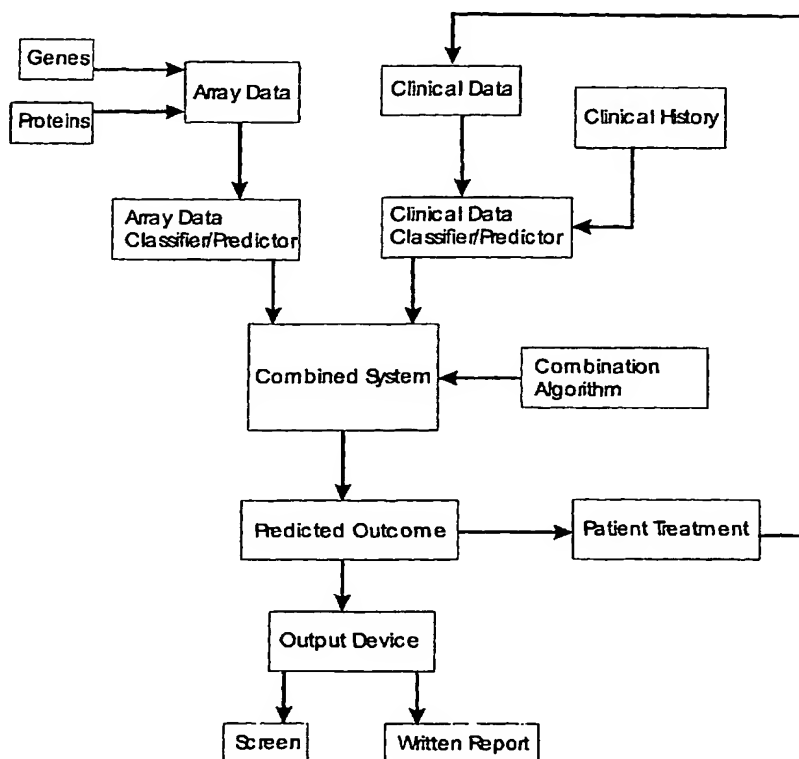
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(54) Title: MEDICAL DECISION SUPPORT SYSTEMS UTILIZING GENE EXPRESSION AND CLINICAL INFORMATION AND METHOD FOR USE



(57) Abstract: Embodiments of this invention provide improved medical decision support systems and methods for using such systems to simultaneously consider two or more different types of information along with estimates of accuracies of the information to produce a combined predictor (Figure 1). Such predictors have greater accuracy compared to use of the individual types of information alone. Increased accuracy can increase the likelihood of correct diagnosis and/or evaluation of clinical condition or outcome, and can decrease the frequency of false negative results, including misdiagnosis. Embodiments of medical decision support systems can include EFuNN, Bayesian or other statistical estimators to produce a combined predictor. The systems can be used to extract relationship rules between sets of genes and clinical variables common for patients of a group, thus making a personalized gene-based treatment possible. Such systems are incorporated into computer-based devices and are run using suitable computer programs.



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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/25563

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 5/00

US CL : 600/300

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/300-301, 523; 705/1-4; 128/903-904, 920, 925

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WEST 2.1

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,317,700 B1 (Bagne) 13 November 2001 (13.11.2001), See entire document.	1-7
A	6,385,474 B1 (Rather et al.) 07 May 2002 (07.05.2002), See entire document.	1, 3, 5, 7
A	US 6,071,236 A (Iliff) 06 June 2000 (06.06.2000), See entire document.	1, 3, 5, 7
A, E	US 6,669,631 B2 (Norris et al.) 30 December 2003 (30.12.2003), See entire document.	1, 3, 5, 7

☐ Further documents are listed in the continuation of Box C.

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